

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/085082 A1

(51) International Patent Classification⁷: **B65D 39/12**,
51/18, 41/04, 41/62, 85/72, 81/32, 1/02, B65B 31/02

(21) International Application Number:
PCT/NZ2005/000038

(22) International Filing Date: 4 March 2005 (04.03.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
531573 4 March 2004 (04.03.2004) NZ
537746 18 January 2005 (18.01.2005) NZ

(71) Applicant and

(72) Inventor: **MELROSE, David, Murray** [NZ/NZ]; 90 Balmoral Road, Mt Eden Road, Auckland, 1003 (NZ).

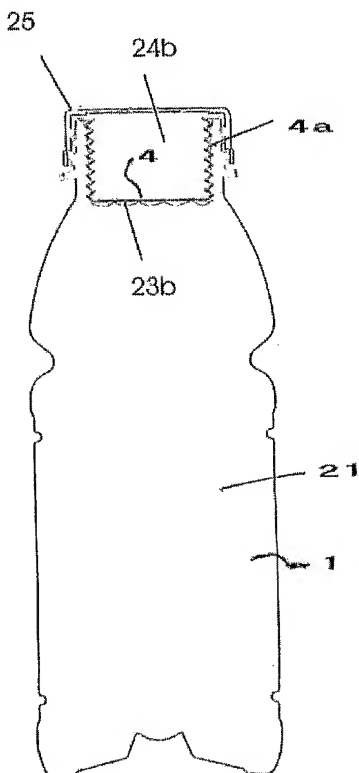
(74) Agent: **BALDWIN**S; PO Box 5999 Wellesley Street, Auckland, 1001 (NZ).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: HEADSPACE SEALING AND DISPLACEMENT METHOD FOR REMOVAL OF VACUUM PRESSURE



(57) Abstract: A container (1) is intended for filling with a hot liquid (21). The container (1) has a neck finish (2) with an opening closed off by a primary seal (4) which has an expandable side wall (4a). As the liquid (21) cools, the side wall (4a) is drawn into the container (1) to remove vacuum pressure created within the container (1). A permanent cap (25) can provide a secondary seal for the container and define a secondary headspace (24b) between the primary and secondary seals (4) (25). In other embodiments the seal (4) can be replaced by a mechanically movable seal which may be locked in its downward position. Also the secondary seal can be provided with a port or aperture to provide access into the secondary headspace for a commodity. Also a commodity such as a tablet or pill may be provided within the secondary headspace

WO 2005/085082 A1



Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.